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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,835	12/04/2003	Craig Andrews	LYNN/0162	8895
24945	7590	11/15/2006	EXAMINER	
STREETS & STEELE 13831 NORTHWEST FREEWAY SUITE 355 HOUSTON, TX 77040			LEE, CYNTHIA K	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,835

Applicant(s)

ANDREWS ET AL.

Examiner

Cynthia Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/10/04, 1/10/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: IDS: 3/18/05, 10/23/06.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-12, drawn to an assembly for an electrochemical cell, classified in class 429, subclass 34.
- II. Claims 13-16, drawn to a bipolar plate assembly, classified in class 429, subclass 38.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require a bipolar plate. The subcombination has separate utility such as a bipolar plate.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such

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claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Jeffrey Streets on 2 Aug 06 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

Acknowledgement has been made of applicant's claim for priority under 35 USC 119 (e).

Information Disclosure Statement

The Information Disclosure Statement (IDS) filed 6/10/2004, 1/10/2005, 3/18/2005, and 10/23/2006 has been placed in the application file and the information referred to therein has been considered.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The "projection" and "recess" are not depicted in Fig. 6. Therefore, the "projection" and "recess" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation that an element is "sufficient" to perform a given function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the limitation "if the relative orientation of the plates provides proper alignment of a plurality of manifolds in the plates" recites a positive limitation. Further, the limitation "proper alignment" (emphasis added) is unclear because it is unclear what constitutes "proper" alignment. The limitation has been interpreted to mean alignment that interlocks the recess on one plate and a projection on another plate.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "the interlocking plates" lacks antecedent basis.

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Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the antecedent basis of "the plate" refers to "an intermediate plate" in claim 11 or "the plate" in claim 1. It was interpreted to mean "an intermediate plate."

Claims depending from claims rejected under 35 USC 112, 2nd paragraph are also rejected for the same.

Claims Analysis

Regarding claim 1, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark (US 6086643).

Clark discloses an electrochemical assembly comprising a plurality of self-aligning plates (applicant's subassembly). Each plate 10 has at least one projection extending outward from the plate and a recess to receive another plate. The recess

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frictionally engages and interlocks the ends of the projections of another plate (Fig. 3A and B) (claims 2-4 and 6). The projections are made from a polymer (2:45-65) (claim 5).

Clark discloses that the electrochemical cell comprises at least one substantially continuous groove and upstand (abstract), but does not disclose that the upstands are not evenly spaced about the plates (claim 7). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to disposition the grooves and upstands at various locations on the plate for the benefit of designating strategic locations on the plate to tightly seal each plate from leaks.

Regarding claim 8, Clark does not disclose that an adhesive is disposed between two self-aligning plates. However, it is known in prior art to use adhesives to fit a tongue and groove on adjacent frames to fit two plates together (Clark 2:7-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add adhesives to Clark's seal assembly an adhesive to further strengthen the seal between two aligned plates. It has been held by the court that the selection of a known material based on its suitability for its intended use is *prima facie* obvious. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07.

Regarding claim 9, Clark discloses that the upstand (applicant's projection) and the groove (applicant's recess) are made of different materials, thus reading on "two or more interlocking plates."

Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki (US 2003/0064272) in view of Clark (US 6086643).

Inagaki discloses a fuel cell assembly comprising a plurality of plates, but does not disclose at least one projection and a recess on a plate that are self-aligning (fig. 2). However, Clark teaches a fuel cell assembly in which each separator is self-aligning by upstands and grooves and forms to seal each plate (fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Inagaki's assembly with Clark's upstand and groove to seal each of Inagaki's plates with upstands and grooves for the benefit of tightly sealing each plate against any leaks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Lee whose telephone number is 571-272-8699. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's trainer, Susy Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ckl

Cynthia Lee

Patent Examiner


SUSY TSANG-FOSTER
PRIMARY EXAMINER